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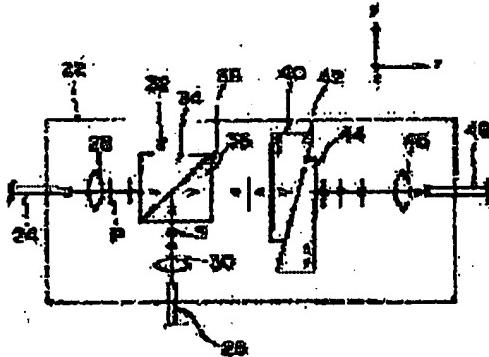
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## (54) POLARIZED WAVE COUPLER

## (57) Abstract:

PURPOSE: To multiplex light beams which have the same wavelength and obtain linear polarized light as their output light by setting the phase difference between linear polarized light beams to an integral multiple when the linear polarized light beams are projected from a birefringent crystal plate.

CONSTITUTION: A polarization beam splitter 32 consists of triangular prisms 34 and 36 made of optionally isometric crystal and a polarized light separating film 38 consisting of a dielectric multi-layered film, etc., interposed between their oblique surfaces. In this case, P polarized light which is made incident on the polarization beam splitter 32 is transmitted through the polarized light separating film 38 and projected having its original optical path. Further, S polarized light which is made incident on the polarization beam splitter 32, on the other hand, is reflected by the polarization beam splitter 38 and projected having the same optical path with the P polarized light. The P polarized light and S polarized light which are projected from the polarization beam splitter 32 while having the same optical path pass through the birefringent crystal plate 40, converged by a lens 46, and coupled with an output port 48 consisting of a polarization plane maintaining fiber.



## LEGAL STATUS

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